Enclosure #1
[redacted]
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TO : Ramo-Wooldridge

25X1A ATTN: [redacted]

SUBJ: System VI, Request For Proposal

1. It is desired to produce a system that will be carried entirely within the nose of the vehicle, with the ARN-6 and ARC-34 as the only other occupants of the nose, that will cover 50 Mc/s - 14 Kmc/s, use 28 Volts for its power, use existing components whenever practical and have the maximum effective antenna aperature consistent with space, weight and structural requirements. It is understood that [redacted] will take charge of this system for Ramo-Wooldridge since the problems are primarily antenna problems. 25X1A

2. It is suggested that this be done in four bands:

a. 50-200 Mc/s using ferrites (System I antenna modified).

b. 200-1000 Mc/s using present System I L-band antenna.

c. 1000-8000 Mc/s using present System I S-band antenna.

d. 8000-14,000 Mc/s using present System I X-band antenna.

The window space on the nose can be increased, particularly if only new access covers need to be built. It is suggested that the present window on the nose tip and the System III window be used if possible so as to avoid adding window space except in the access covers.

3. The HRB preamplifier for 50-200 Mc/s is planned forthe lower band. The Rambo preamplifier, with power supply changed, will be for the 8-14 Kmc/s. Ramo-Wooldridge produced preamps will be rebuilt to meet this requirement. Additional RF amplifiers will be built as needed but

are not to be a part of the proposal.

4. It is expected that two transistorized System I amplifier pairs and two System I recorders will be used in the system. With four pre-amplifiers, one for 50-200 Mc/s, one for 200-600 Mc/s, one for 1-2, 2-4 or 4-8 Kmc/s and one for 8-14 Kmc/s, the total weight is expected to be under 60 pounds. The weight of the 200-600 Mc/s preamp may be assumed to be equal to that of the 50-200 Mc/s. The weight of the 1-2, 2-4 or 4-8 Kmc/s preamp can be assumed to be equal to the 8-14 Kmc/sec unit. Weight saving is very important. Common power supplies or other methods of weight saving should be considered. It is desired to get as much collection capability with a high degree of flexibility in a package weighing as much under 60 lbs., as possible. Right-left indication is desired but can be degraded some in the interest of weight saving. The usefulness of the finished system will be inversely proportional to its weight.

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5. [redacted]

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[redacted] is desired as consultant on the project for (a) preparation of the technical aspects of the proposal (b) periodic inspection of the progress and, (c) acceptance testing.

6. A suggested block diagram is attached.